

CLAIMS

1. A protective cover for a cassette adapted to handle at least one image recording medium responsive to and recording information related to electromagnetic energy impinging 5 on the image recording medium, the protective cover comprising:

a receptacle adapted to substantially enclose the cassette, the receptacle formed substantially by a material that reduces a possibility of at least one contaminant from contacting the cassette;
an opening through which the cassette may be inserted into the receptacle; and
10 a release through which the cassette may be removed from the receptacle.

2. The protective cover of claim 1, wherein the material is substantially transparent to radiation in at least an X-ray spectrum.

15 3. The protective cover of claim 1, wherein the material is substantially transparent to radiation in a visible spectrum.

4. The protective cover of claim 1, wherein the material is substantially resistant at least to human bodily fluids.

20 5. The protective cover of claim 1, wherein the release includes at least one perforation.

25 6. The protective cover of claim 1, wherein the opening through which the image recording cassette is inserted includes the release through which the cassette may be removed.

7. The protective cover of claim 1, wherein the receptacle is formed by a front face substantially joined to a back face except at a free edge forming the opening.

30 8. The protective cover of claim 7, wherein the back face has a flap portion extending beyond the free edge and adapted to be folded over the free edge to substantially block the opening when the protective cover is placed in a closed position.

9. The protective cover of claim 8, wherein the flap portion has an adhesive region adapted to secure the flap portion to the front face.

5 10. The protective cover of claim 8, wherein at least one of the flap portion and the front face includes fastening means adapted to secure the flap portion to the front face when the protective cover is in the closed position.

10 11. The protective cover of claim 7, wherein the release is formed proximate an edge of the front face other than the free edge by providing at least one tear line.

12. The protective cover of claim 7, wherein the release is formed proximate an edge of the back face by providing at least one tear line.

15 13. The protective cover of claim 8, wherein the release is formed by a tear line on the flap portion.

20 14. The protective cover of claim 1, wherein the receptacle is formed by a front face substantially joined with a back face, the back face having a first portion and a second portion separated by a first free edge and a second free edge, respectively, the first portion and the second portion arranged with respect to each other such that the second free edge overlaps the first free edge to form an overlap region to enclose the receptacle.

25 15. The protective cover of claim 14, wherein the overlap region can be manipulated to expose the receptacle by causing the first free edge to move in a direction substantially orthogonal to the first free edge and causing the second free edge to move in a direction substantially orthogonal to the second free edge thereby forming at least one of the opening and the release.

30 16. The protective cover of claim 1, wherein the receptacle is dimensioned to enclose a cassette adapted to handle medical image recording media.

17. The protective cover of claim 1, wherein the receptacle is dimensioned to enclose a cassette adapted to withstand stresses involved in medical imaging.

18. An image recording apparatus comprising:
5 an image recording medium responsive to and capable of storing information related to electromagnetic radiation impinging on the image recording medium;
a cassette substantially enclosing the image recording medium; and
at least one removable protective cover dimensioned to substantially enclose the cassette, the removable protective cover adapted to facilitate the prevention of at least one
10 contaminant from contacting the cassette.

19. The image recording apparatus of claim 18, wherein the removable protective cover is intended to substantially enclose the cassette during at least one of storage and exposure of the image recording medium to X-ray radiation and removed during retrieval of one or more
15 latent images from the image recording medium.

20. The image recording apparatus of claim 19, wherein the at least one removable protective cover includes means for inserting and removing the cassette from the at least one protective covering.
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21. The image recording apparatus of claim 20, wherein the means for inserting and removing includes an opening in the at least one protective covering.

22. The image recording apparatus of claim 21, wherein the means for inserting and
25 removing includes a release.

23. The image recording apparatus of claim 19, wherein the removable protective cover includes a plastic envelope.

30 24. The image recording apparatus of claim 19, in combination with an image reader having a loader adapted to accept the cassette, wherein the removable protective cover is removed before the cassette is inserted into the loader.

25. The image recording apparatus of claim 23, wherein the plastic envelope comprises:

5 a first open position to facilitate insertion of the image recording cassette into the envelope; and

a closed position adapted to substantially enclose the image recording cassette.

26. The image recording apparatus of claim 25, further comprising a first arrangeable portion to facilitate a first transition of the envelope from the first open position to 10 the closed position.

27. The image recording apparatus of claim 26, wherein the first arrangeable portion facilitates a second transition of the envelope from the closed position to a second open position configured such that the image recording cassette can be removed from the envelope.

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28. The image recording apparatus of claim 26, further comprising a second arrangeable portion that facilitates a second transition of the envelope from the closed position to a second open position configured such that the image recording medium can be removed from the envelope.

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29. The image recording apparatus of claim 28, wherein the second arrangeable portion includes a perforation.

30. The image recording apparatus of claim 18, wherein the image recording 25 medium is a phosphor plate for medical imaging.

31. The image recording apparatus of claim 18, wherein the cassette is adapted to withstand at least stresses involved in routine medical imaging.

30 32. A method of protecting a cassette containing an image recording medium responsive to electromagnetic radiation from at least one contaminant, the method comprising acts of:

inserting the cassette into a first protective envelope prior to a first exposure to the electromagnetic radiation;

providing the first exposure of the image recording medium to the electromagnetic radiation; and

5 removing the cassette from the first protective envelope subsequent to exposure to the electromagnetic radiation.

10 33. The method of claim 32, further comprising an act of acquiring at least one image from the image recording medium subsequent to the act of removing the cassette from the first protective envelope.

34. The method of claim 33, further comprising an act of inserting the cassette into a second protective envelope after the act of acquiring at least one image and prior to a second exposure to electromagnetic radiation subsequent to the first exposure.

15 35. The method of claim 34, wherein the act of acquiring at least one image includes an act of loading the cassette into an image reader.

20 36. The method of claim 35, wherein the image recording medium is a phosphor medium.

37. The method of claim 36, further comprising acts of:
removing the phosphor medium from the cassette prior to the act of acquiring at least one image; and

25 inserting the phosphor medium back into the cassette after the act of acquiring at least one image and before the act of inserting the cassette into the second protective envelope.

38. The method of claim 32, wherein the act of inserting the cassette into a first protective envelope includes an act of inserting the cassette through an opening in the protective envelope and the act of removing the cassette includes an act of actuating a release of the protective envelope.

39. The method of claim 38, further comprising an act of closing the envelope by substantially blocking the opening before the act of providing the first exposure of the image recording medium to electromagnetic radiation.

5 40. A protective cover for use with a cassette adapted to handle image recording media responsive to and capable of storing information in proportion to electromagnetic radiation impinging on a surface of the image recording media, wherein the use includes:

covering the cassette containing an image recording medium with the protective cover prior to a first exposure to X-ray radiation;

10 exposing the phosphor medium to X-ray radiation to record image information; and
removing the protective cover from the cassette after exposing the image recording medium.

15 41. The use of claim 40, wherein exposing the image recording medium includes positioning the cassette proximate to a patient to image internal structures of the patient.

42. The use of claim 40, further including storing the cassette after covering the cassette and before exposing the image recording medium.

20 43. The use of claim 40, further including covering the cassette with a second protective cover after removing the protective cover from the cassette.

44. The use of claim 43, wherein the image recording medium includes a phosphor medium.

25 45. The use of claim 43, further including acquiring at least one image from the phosphor medium after removing the protective cover and before the act of covering the cassette with the second protective cover.

30 46. The use of claim 45, further including:
removing the phosphor medium from the cassette prior to acquiring the at least one image; and

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inserting the phosphor medium back into the cassette after acquiring the at least one image and before covering the cassette with the second protective cover.